LECTOTYPIFICATION OF *LUPINUS SUBCARNOSUS* AND *L. TEXENSIS* (FABACEAE)

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Shinners (1953) correctly surmized that the name of our then and only state flower of Texas, *Lupinus subcarnosus* Hook., was perhaps typified by two or more discordant elements, noting that "It is possible that Hooker had more than one species among the collections..." upon which he based his name. In connection with a forthcoming book on the bluebonnets of Texas by the junior author (Andrews 1986), all collections of the Texas bluebonnets housed at The Royal Botanic Gardens, Kew, England (where Hooker worked), were borrowed so as to resolve any possible nomenclatural ambiguities with respect to the application of the correct scientific names of both *Lupinus subcarnosus* and *L. texensis*, the two most abundant bluebonnets of central Texas.

Lupinus subcarnosus was first described by Hooker in the Botanical Magazine in 1835. His description was accompanied by a colored plate (t.3467), this being a fairly accurate drawing of what has long been accepted as the common clay-land bluebonnet of the more western portions of central Texas. Shinners (1953) notes that "despite the inaccurate illustration...his description leaves no doubt as to the application of the name *subcarnosus*." Nevertheless, examination of the possible type material available to Hooker shows that the only two specimens which he cited in his protologue of this species are, indeed, discordant elements.

The first cited collection in the protologue of *Lupinus subcarnosus*, a specimen from Bexar County, Texas made by *Berlandier* in 1828, is actually a specimen of what has long been called *L. texensis* Hook. The second and only other cited specimen is that of *Drummond* collected "between Brazoria and San Felipe" in 1835. This latter collection is what most workers have long called *L. subcarnosus*. The original description, as noted above, is accompanied by a hand-colored plate. The plate itself does not match the description. Apparently Hooker described *L. subcarnosus* largely from the pressed material at his disposal, the drawing having been rendered by a staff artist from plants of what Hooker subsequently described as *L. texensis*. When he described the latter species in the same year he was clearly befuddled by the very similar illustrations for he comments "Much

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and closely as this plant resembles *Lupinus subcarnosus* figured at tab. 3467, it nevertheless appears to me to be really distinct." Which it is! The problem is simply that *both* of the illustrations rendered are of the same species, *L. texensis*.

Under Article 7 of the International Code of Botanical Nomenclature, where a holotype has not been designated for a given taxon, a lectotype must be selected from among the syntypes cited or examined by the original author. This is especially critical where discordant elements make up the syntypes. Happily, in this instance, we are obliged to lectotypify *Lupinus subcarnosus* by the aforementioned Drummond collection, which is the only such specimen in the Hooker Herbarium that is annotated by Hooker himself.

In his description of *Lupinus texensis*, which was also published in the Botanical Magazine of 1835, this too accompanied by a colored plate (t.3492), Hooker does not cite a specimen but rather merely notes the species to occur in Texas, citing specifically the city of San Felipe, which is in Austin County and about which both *L. subcarnosus* and *L. texensis* may be found to this day.

Three herbarium sheets of *L. texensis* are found in the Hooker Herbarium housed at Kew. Two of these bear Drummond numbers *143* of his third collection made in 1835. The other sheet also bears this Drummond collection, along with a Lindheimer collection made in 1847.

From among these we have selected the Royal Botanic Gardens specimen number 2 (penciled loan number) as the lectotype. This sheet has both flowering and fruiting material of the species concerned and, in addition, upon this is a handwritten notation, presumably by Hooker, which reads, "similar to *142*, but different." We selected *Drummond 142*, as noted above, as the lectotype of *Lupinus subcarnosus*.

In summary, Hooker's descriptions of *Lupinus subcarnosus* and *L. texensis* were accompanied by colored illustrations of the same taxon. This has caused some confusion with respect to the correct application of the names concerned. Study of the types and protologues of both species reveals that *L. subcarnosus* is correctly applied to the more eastern sandy-land bluebonnet and that *L. texensis* applies to the more widespread, more western, clay-land bluebonnet.

It is altogether fitting that in this, our sesquicentennial year, the scientific names of our two most common official state flowers (*Lupinus* spp., cf. Andrews 1986), both described in the year 1835, can now be said to rest upon solid typifications.

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